HCIP Routing & Switching Fast Track

Huawei

- **Nível:**
- **Duração:** 35h

Sobre o curso

The HCIP Routing & Switching Fast Track course allows those who already have a knowledge of Routing & Switching equivalent to that provided by the courses listed in the prerequisites, to follow a shorter course than the full courses (HCIP-IERS + HCIP-IENP + HCIP-IEEP) to prepare for the HCIP-R&S (Composite Certification Training) exam.

This 5 day HCIP Routing & Switching fast track course prepares you for the H12-224 exam.

Online Course

Enroll to access these online (MOOC) HCIP Routing & Switching courses – **IERS**, **IENP**, **IEEP** – that will help you prepare for the big training day. Make sure you take the time to work through as much of the content as possible to ensure a better instructor-led experience.

Destinatários

The course is aimed at technicians who must take the HCIP certification exam having already acquired knowledge equivalent to that provided by a similar certification with other vendor

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Pré-requisitos

Equivalent certification from another vendor, like Cisco Certified Network Professional

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Programa

- Ethernet Technology

- VLAN
- STP/RSTP/MSTP
- MPLS VPN
- Huawei Ethernet Switches
- IP Basics
- OSPF Routing Protocols
- BGP Routing Protocols
- Routing and Routing Control
- Multicast Protocols
- NE Routers
- Network Security
- High Availability HA
- QoS

Ethernet Technology (hands-on)

- Ethernet evolution process,
- Port auto-negotiation technology,
- Port trunking,
- Port mirroring,
- Working principles of a Layer 2 switch
- Working principles of a Layer 3 switch

VLAN (hands-on)

- 802.1Q encapsulation and implementation of VLAN in Huawei products
- Inter-VLAN routing, Super VLAN, MUX VLAN, ARP proxy, and VLAN mapping
- GVRP principles, configuration, and implementation
- QinQ principles, configuration, and implementation

STP/RSTP/MSTP (hands-on)

- STP principles and configuration
- RSTP principles and configuration
- MSTP principles and configuration
- Network Access Technology
- 802.1X access authentication techniques and principles
- DHCP principles and extended switch feature, DHCP snooping

MPLS VPN (hands-on)

- MPLS principles and implementation

    - MPLS frame format and encapsulation,
    - MPLS data forwarding process,
    - LDP neighbor discovery and session establishment,
    - LDP label management
    - MPLS loop avoidance
- Basic principles and implementation of MPLS VPN
    - Single-domain MPLS VPN principles,
    - Implementation and application of OSPF in MPLS VPN
- MPLS VPN fault diagnosis
    - Troubleshooting roadmap and debugging methods of control plane faults
    - Troubleshooting roadmap and debugging methods of data plane faults

Huawei Ethernet Switches (hands-on)

- Hardware structure and working principles of Huawei switches
- VRP software features of Huawei switches

IP Basics (hands-on)

- IPv4 address planning
    - Classless IP address planning
    - Classless Inter-Domain Routing (CIDR)

OSPF Routing Protocols (hands-on)

- Basic principles of link state routing protocols
- OSPF principles, configuration, and implementation
    - Neighbor and adjacency
    - Protocol packet and LSA
    - Database synchronization,
    - Intra-area route calculation
    - Inter-area
- Route calculation, and external route calculation
- Principles and configuration of OSPF special areas: stub area, totally stub area, and not-so-stubby area (NSSA)
- Basic methods of OSPF fault diagnosis

BGP Routing Protocols (hands-on)

- BGP principles: AS, BGP neighbor, route distribution methods, and route advertisement rules
- BGP path selection
- BGP route aggregation

- BGP routing policy: common attributes and routing policies of BGP
- Basic principles and configuration of BGP route reflection and AS confederations for BGP
- BGP multi-homing
- BGP fault diagnosis methods

Routing and Routing Control (hands-on)

- Route filtering by using filtering tools such as ACL, route policy, IP-prefix, and AS-Path
- Mutual route import between IP routing protocols and advertisement of default routes
- Policy-based route

Multicast Protocols (hands-on)

- Basic principles and configuration of IGMPv1/v2/v3 and IGMP snooping
- Basic principles and configuration of PIM-DM and PIM-SM

NE Routers (hands-on)

- Hardware structure and working principles of NE routers
- VRP software features of NE routers

Network Security (hands-on)

- Basic concept of network security and basic functions and principles of firewall
- Firewall NAT technology and anti-attack techniques
- Dual-node cluster hot backup technique of firewall
- Knowledge and networking application of Eudemon firewalls of Huawei

High Availability ,HA (hands-on)

- Bidirectional Forwarding Detection (BFD) principles
- Basic principles of VRRP,IP Reroute,FRR
- Principles and networking applications of NSF and GR

QoS (hands-on)

- IP QoS model and differentiated services (DiffServ) model
- Basic principles of classification and marking, traffic policing and shaping, congestion management, congestion avoidance, and link efficiency mechanisms
- Class-based QoS principles